Portland Transportation Climate Action

Rail~Volution
October 20, 2010

Peter Hurley, Portland Bureau of Transportation
Climate Action Plan
Transportation Climate Strategies
Evaluation
Sustainable Transportation Access
Rating System (STARS)
Principles
Portland Climate Action Plan

Transportation GHGE: 38%

Urban Form & Mobility Goals:
- 10% by 2015
- 25% by 2020
- 40% by 2030
Urban Form & Mobility 2030 Objectives:

- 90% of residents can easily walk/bike to daily needs
- Reduce per capita VMT 30%
- Reduce transport fuel life cycle GHG 20%
- Improve road system performance
- Improve freight movement efficiency
- Increase passenger vehicle efficiency
Transportation Strategies Evaluation

Emissions profile:

> 98% from driving

< 2% from Bureau operations
Transportation Strategies Evaluation

21 strategies evaluated
10 priority strategies
  TDM, TSM
Parking Management
Land Use
Multimodal Facilities
Lighting
## Transportation Strategies Evaluation

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median commute miles per day for 33 most populous US metro areas</td>
<td>24.3</td>
</tr>
<tr>
<td>Average daily miles for Portland area commute</td>
<td>20.3</td>
</tr>
<tr>
<td>Miles saved compared to median</td>
<td>2.9 B</td>
</tr>
<tr>
<td>Transportation costs saved compared to median</td>
<td>$1.1 B</td>
</tr>
<tr>
<td>Estimated value of time spent commuting at $15 per hour</td>
<td>$1.1 B</td>
</tr>
<tr>
<td>100 million hours less traveled per year saves</td>
<td>$1.5 B</td>
</tr>
<tr>
<td>Total savings per year</td>
<td>$2.6 B</td>
</tr>
</tbody>
</table>
Project-Level GHGE Projections

Roadway & transit projects
Multimodal projects
Bike projects
Sustainable Transportation Access Rating System

“LEED for Transportation”

Framework for designing and/or rating:

Projects
Employer Programs
Plans

Voluntary, national system for public agencies & private sector consultants
What is STARS?

Performance-based system focused on:

• Access
• Climate + Energy
• Cost Effectiveness

Multimodal: Compares performance across all modal strategies

Full life cycle analysis

Version 1.0 Available in 3 Weeks
Who Is Developing STARS?

- CH2M HILL
- Parsons Brinckerhoff
- Confluence Planning
- ECONorthwest
- David Evans & Associates
- Brightworks
- TriMet
- Evergreen State College
- Portland Bureau of Transportation
Integrates Strategies to Achieve Goals

Transportation Demand Management (TDM)

Vehicle Capacity (Lanes, Ramps, Intersections)

Land Use

Transit

Transportation System Management (TSM)
Potential Benefits

Reduced parking in new development
“Boomerang Dollars” – money leaving the local economy is retained by reducing petroleum spending
Increase healthy transportation: walking, cycling, transit by employees & residents
Help meet economic, climate, livability and equity goals
Goals Drive Strategies
Analyze at Plan, Project and Program Levels
Develop Tools to Project GHGE
STARS: Grounded in Sustainability
Transform transportation industry practice in order to:

• Improve access for all people
• Cut oil dependence and climate pollution
• Maximize cost effectiveness
• Move toward true sustainability
How Does STARS Work?

- Create a Multi-Disciplinary Team
- Sustainability Workshop
- Goals: Access, Climate + Energy, $
- Evaluate Strategies
- Select Alternatives
- Implement
- Monitor Performance
STARS Users

Public Agency and Consultant Planners and Project Managers
- To objectively improve project or plan performance

Elected Officials
- To show the public their commitment to high benefit/cost and to sustainable transportation & land use

Employers
- To recruit and retain employees attracted to companies committed to sustainable practices
<table>
<thead>
<tr>
<th>Project Phase(s)</th>
<th>Access</th>
<th>Integrative Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>A 1 Establish Mode Split Goal</td>
<td>IP 1 Comprehensive Project Goals &amp; Objectives (purpose &amp; need)</td>
</tr>
<tr>
<td></td>
<td>A 2 Evaluate Expanded TDM Strategies</td>
<td>IP 2 Multi-Discipline Project Team</td>
</tr>
<tr>
<td></td>
<td>A 3 Evaluate Expanded TSM Strategies</td>
<td>IP 3 Public Stakeholder Engagement</td>
</tr>
<tr>
<td></td>
<td>A 4 Evaluate Expanded Transportation Options</td>
<td></td>
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<td></td>
<td>A 5 Evaluate Expanded Land Use Strategies</td>
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<td></td>
<td>A 6 Implement Expanded Options, TDM, TSM and Land Use Strategies</td>
<td></td>
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<td></td>
<td>A 7 Access Performance</td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>ce 1 Climate &amp; Energy Goal</td>
<td>CE 1 Climate &amp; Energy Goal</td>
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<tr>
<td></td>
<td>CE 2 Vehicle Mile Reduction Goal &amp; Evaluation</td>
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<tr>
<td>All</td>
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</tbody>
</table>

Yes  ?  No  Yes  ?  No  Yes  ?  No

Project Name: ____________________________________________________________________________
Contact: __________________________________________________________________________________

One Star _-_ points, Two Star _-_ points, Three Star _-_ points, Four Star _-_ points

Integrative Process

IP 1 Comprehensive Poject Goals & Objectives (purpose & need)
IP 2 Multi-Discipline Project Team
IP 3 Public Stakeholder Engagement

Access

Required

A 1 Establish Mode Split Goal
A 2 Evaluate Expanded TDM Strategies
A 3 Evaluate Expanded TSM Strategies
A 4 Evaluate Expanded Transportation Options
A 5 Evaluate Expanded Land Use Strategies
A 6 Implement Expanded Options, TDM, TSM and Land Use Strategies
A 7 Access Performance

Climate + Energy

Required

CE 1 Climate & Energy Goal
CE 2 Vehicle Mile Reduction Goal & Evaluation
CE 3 Materials & Construction Goal & Evaluation
CE 4 Improved Flow Goal & Evaluation

Yes  ?  No  Yes  ?  No  Yes  ?  No

One Star _-_ points, Two Star _-_ points, Three Star _-_ points, Four Star _-_ points

Project Totals